

RECORDS AND DESCRIPTIONS OF NEOTROPICAL  
CRANE FLIES (TIPULIDÆ: DIPTERA), XXIV

BY CHARLES P. ALEXANDER

AMHERST, MASSACHUSETTS

The preceding part under this general title was published in this JOURNAL (vol. 56: 137-148; September 1948). The novelties described herewith are all from Peru where they were collected by my friends Messrs. José M. Schunke and Felix L. Woytkowski, the latter assisted by his son George. The types of the species are preserved in my personal collection of these flies.

Genus *Epiphragma* Osten Sacken**Epiphragma (Epiphragma) mithras** new species.

Size small (wing, male, 9 mm. or less); præscutum conspicuously patterned, chiefly covered by a Y-shaped brown area, the sublateral parts yellowed; pleura yellow, striped longitudinally with brownish black; femora yellow, with a single brown subterminal ring; wings pale yellow, with a brown pattern that is partly ocelliform; basal half of cell *Cu* uniformly darkened; abdominal sternites conspicuously patterned with yellow and dark brown; outer dististyle terminating in a curved spine and with a subapical flange.

MALE.—Length about 7-8 mm.; wing 8-9 mm.; antenna about 1.8-2 mm.

FEMALE.—Length about 7.5-9 mm.; wing 7-9.5 mm.

Rostrum brown, palpi somewhat darker brown. Antennæ short, as shown by the measurements; scape and pedicel black, the former pruinose; basal flagellar segments yellow, including the fusion-segment, the outer segments deepening to yellowish brown; fusion segment involving three segments. Head fulvous orange, the center of vertex slightly more darkened.

Pronotum and cervical sclerites buffy above, blackened on sides. Mesonotal præscutum conspicuously patterned, chiefly covered by a dark brown Y-shaped area, the fork or cephalic portion more reddish brown, the sublateral parts yellowed, the color continued caudad onto the scutal lobes; posterior sclerites of notum chiefly dark brown, the central area of scutum and the scutellum sparsely yellow pollinose. Pleura obscure yellow, striped longitudinally with brownish black, the complete dorsal stripe extending from the cervical region to the postnotum, widened behind; ventral darkening best indicated on the coxæ and meral region, on the latter variegated with paler. Halteres yellow. Legs with the coxæ blackened basally, as described, the tips broadly yellow; trochanters infuscated above, yellow on inner face; remainder of legs yellow, the femora with a single brown ring

that is subequal to or a trifle wider than the pale tip. Wings with the ground pale yellow, the costal region more saturated; a conspicuous brown pattern that is in part ocelliform; pale costal interspaces very extensive; dark ocelli centering at origin of *Rs*, cord, outer end of cell *1st M*<sub>2</sub> and fork of *M*<sub>1+2</sub>; incomplete ocelli at arculus and marginally at ends of veins *R*<sub>5</sub> to *Cu*<sub>1</sub>, inclusive; dark marginal areas of radial field, except as noted, solid; more than the basal half of cell *Cu* uniformly darkened; outer end of cell *1st A* with three, cell *2nd A* with about six linear dashes, additional to those at ends of the veins; veins yellow in the ground portions, clear light yellow on cephalic third, brown in the patterned areas. Venation: *Sc*<sub>2</sub> longer than *Sc*<sub>1</sub>, ending about opposite the fork of *R*<sub>2+3+4</sub>; *Rs* square at origin; *R*<sub>2+3+4</sub> subequal to either *R*<sub>1+2</sub> or *R*<sub>2+3</sub>; *m-cu* at near midlength of cell *1st M*<sub>2</sub>.

Abdomen dark brown, narrowly paler at the impressed areas; sternites dark brown, conspicuously patterned with obscure yellow, on the intermediate segments including three areas, one basal and medial, the others apical in position; on the outer segments these areas increase in size and finally become confluent and more or less pruinose; hypopygium brownish yellow. Male hypopygium with the lobes of the tergite obtuse, narrower than the median notch. Interbase with the inner rod slender, the tip abruptly recurved into a spine. Membranous notch on mesal face of basistyle unusually deep and conspicuous. Outer dististyle terminating in a curved spine, with a flange on lower margin at base of spine. Inner dististyle longer, appearing as a flattened yellow paddle, the tip obtuse, on the disk with a group of five or six strong setae.

Habitat.—Peru.

Holotype, ♂, Chinchao, Huanuco, on wooded hills, altitude 2500 meters, September 20, 1947 (George Woytkowski). Allotopotype, ♀, September 21, 1947. Paratopotypes, 10 ♂ ♀, September 14–27, 1947.

This unusually small and attractive member of the genus is most similar to *Epiphragma* (*Epiphragma*) *jurator* Alexander, differing in the pattern of the body and wings and in the details of venation. The male of *jurator* is still unknown. The Tropical American species of the genus have been listed in a recent paper (Rev. de Ent., 19: 168–175, fig. 5; 1948).

#### Genus *Teucholabis* Osten Sacken

***Teucholabis* (*Teucholabis*) *ludicra* new species.**

Allied to *perangusta*; head above yellow with a brownish black median stripe on vertex, terminating in a small more blackened tubercle on anterior vertex; thorax reddish, with a transverse girdle on the praescutum and anepisternum; femora yellow, with two narrow brown rings; wings whitish

subhyaline, restrictedly patterned with brown, the apex narrowly darkened; male hypopygium with the apical lobe of basistyle unusually long and slender; appendage of style a gently curved rod that narrows gradually into a black terminal spine.

MALE.—Length about 10 mm.; wing 7 mm.

Rostrum darkened above, yellow on sides, about two-thirds as long as remainder of head; palpi black. Antennæ with scape yellow, pedicel brown, flagellum black; flagellar segments oval to long-oval, shorter than the verticils. Front light yellow, remainder of head somewhat deeper yellow; a brownish black median stripe on vertex, on the anterior vertex produced into a small, more intensely blackened tubercle.

Cervical region and pronotum dark liver brown. Mesonotal præscutum chiefly reddish, on either side with a transverse black line placed just behind the pseudosutural foveæ; remainder of notum reddish, each scutal lobe extensively blackened; both the mediotergite and pleurotergite with large brownish black areas. Pleura with central portion chiefly covered by a silvery gray bloom; anepisternum darkened, being a continuation of the præscutal darkened area; ventral pleurites more reddish. Halteres dark brown, the base of stem and apex of knob obscure yellow. Legs with the coxæ and trochanters yellow; femora yellow, each with two narrow brown rings, the outer one paler and subterminal in position; pale space between the dark rings four or five times as extensive as the basal dark ring; dark rings of posterior femora somewhat broader and darker; tibiae yellow, the tips narrowly pale brown; basitarsi yellow, the remaining tarsal segments brownish black; proximal fifth of posterior basitarsi dilated and provided with a linear glandular area. Wings whitish subhyaline, restrictedly patterned with pale brown, including the very narrow wing tip; a somewhat wider band at cord and a larger but more diffuse subbasal area; stigma darker brown; veins pale brown to brownish yellow, the latter including the costa. Venation;  $Sc_1$  ending about opposite three-fifths  $Rs$ , the branches of the latter parallel to one another for virtually their entire length;  $m-cu$  about one-fourth to one-fifth its length beyond the fork of  $M$ .

Abdomen yellow, the intermediate sternites with a pair of linear brown dashes, these diverging outwardly; basal sternites more extensively darkened. Sternal pockets on segments five and six well developed, particularly on the former, the more posterior setæ of the pocket thickened and strongly curved; pocket of sternite six including about a dozen powerful bristles on either side, the more cephalic ones smaller. Male hypopygium with the apical lobe of basistyle unusually long and slender, provided with numerous setæ, some of which are very long, subequal to or slightly longer than the lobe; appendage of basistyle a gently curved rod that gradually narrows into a black terminal spine, the lower face of the rod fringed with long yellow setæ; mesal flange of basistyle coarsely and irregularly crenate or serrate. Outer dististyle a simple darkened rod, provided along lower margin and near apex with long coarse setæ and a few microscopic serru-

lations. Inner dististyle with the usual apical blade narrow, terminating in a single point; the usual basal lobe of the style of unusual size, much larger than the blade, terminating in about four stout setæ, with a few other subterminal ones. Aedeagus at apex directed laterad into a slender blackened spine; lower face below apex slightly protuberant and provided with about 15 or 16 strong setæ.

Habitat.—Peru.

Holotype, ♂, Cerro Azul, Loreto, April 20, 1947 (José M. Schunke).

The most similar described species is *Teucholabis* (*Teucholabis*) *perangusta* Alexander, which has the pattern of the body, wings and legs somewhat the same. The present fly differs in the hypopygial characters, particularly the unusually slender apical lobe of the basistyle and the structure of the appendage of the latter. The Tropical American species of *Teucholabis* have been listed in a recent paper (Rev. de Ent., 17: 375-400, 14 figs., 1947).

*Teucholabis* (*Teucholabis*) *lauta* new species.

Mesonotal præscutum reddish yellow, with three brownish black areas; pleura yellow, conspicuously variegated with brownish black; anterior part of head black, the posterior portion abruptly yellow; femora yellow, the tips narrowly blackened; wings broad, pale yellow, very restrictedly patterned with brown, including a small spot at end of vein 2nd *A*; abdomen bicolored, dark brown, the incisures yellow; male hypopygium with the appendage of basistyle short, broad-based; outer dististyle simple.

MALE.—Length about 7.5 mm.; wing 6.2 mm.

Rostrum, palpi and antennæ black; flagellar segments oval. Head in front black, the color continued onto the posterior vertex as far as the posterior border of eyes, the remainder of head behind abruptly yellow.

Pronotum light yellow, narrowly darkened on sides. Mesonotal præscutum reddish yellow, with three brownish black areas, the median one most extensive; lateral areas elongate, occupying the outer borders of the lateral stripes; humeral and lateral portions clearer yellow; scutal lobes reddish yellow, the central region clearer yellow, crossing the suture onto the præscutum, the lateral border of each lobe narrowly dark brown; scutellum light yellow, restrictedly darkened on either side; mediotergite yellow on anterior half but narrowly infuscated behind the scutellum, the posterior half more reddish brown. Pleura and pleurotergite pale yellow, variegated with brownish black, the most conspicuous area being a slightly broken dorsal stripe across the propleura, dorsal anepisternum, dorsal pteropleurite and the pleurotergite, the last paler; a further restricted darkening on the ventral sternopleurite. Halteres yellow. Legs with all coxæ and trochanters yellow; fe-

mora yellow, the tips narrowly blackened, the amount subequal on all legs, involving about the outer sixth of the posterior femora; tibiæ and basitarsi yellow, the tips more narrowly blackened, remainder of tarsi black; posterior basitarsi very feebly dilated on proximal fifth. Wings broad, pale cream yellow, very restrictedly patterned with brown, including the subcircular stigma and a very narrow seam over the cord, best indicated by a deepening in color of the veins; a much paler brown cloud near outer end of vein *2nd A* in cell *1st A*; veins yellow, darkened as described. Venation: *Sc* long, *Sc*<sub>1</sub> ending nearly opposite two-thirds the length of *Rs*, *Sc*<sub>1</sub> relatively long; branches of *Rs* parallel for most of their lengths, *R*<sub>5</sub> thence strongly deflected caudad, cell *R*<sub>4</sub> at margin approximately two-thirds of cell *R*<sub>2</sub>; distal section of vein *M*<sub>1+2</sub> arcuated at origin; *m-cu* more than one-half its length beyond the fork of *M*.

Abdomen conspicuously bicolored, the incisures, especially the apices of the segments, yellow, the remainder broadly dark brown; hypopygium yellow, the basistyles chiefly darkened. Sternites five to seven, inclusive, with glandular pockets, that on segment five largest and best developed, consisting of a patch of microscopic spinulæ interspersed with scattered strong setæ; on segments six and seven, the setæ are long and delicate, in more or less distinct longitudinal rows on either side of the broad median space. Male hypopygium with the appendage of basistyle apical in position, short, broad-based, with slightly less than the outer half narrowed into a straight black spine, the expanded portion with setæ; mesal flange inconspicuous. Outer dististyle a simple rod that is about twice as long as the appendage of basistyle, gradually narrowed to a short acute spine; surface of style with coarse setæ. Inner dististyle with the outer blade or beak produced into two unequal points, the outer one longest; lobe of style low, with three or four setæ, the longest apical. Aedeagus terminating in a stout black spine or lobe, oblique in position, the lower margin below the lobe with three long setæ.

Habitat.—Peru.

Holotype, ♂, Fundo Sinchono, Huanuco, altitude 1500 meters, August 8, 1947 (José M. Schunke).

The present fly is not closely allied to any of the species so far described. Superficially it suggests forms such as *Teucholabis* (*Teucholabis*) *mendax* Alexander, differing in all details of body coloration and in the structure of the malé hypopygium.

***Teucholabis* (*Teucholabis*) *lineipleura* new species.**

Mesonotum brownish yellow, the pleura conspicuously striped with black; rostrum yellow; femora obscure yellow, the tips blackened; wings with a strong brownish tinge, the preareolar and costal fields more whitened; branches of *Rs* generally parallel to one another, cell *R*<sub>2</sub> at margin being fully three times as extensive as cell *R*<sub>4</sub>; male hypopygium with the append-

age of basistyle subapical in position, a virtually straight spine that is fringed with conspicuous yellow setæ; outer dististyle a long sinuous simple rod provided with strong setæ, aedeagus terminating in a curved spine.

MALE.—Length about 5.3–5.5 mm.; wing 5.8–6.4 mm.

Rostrum yellow, of moderate length, approximately one-half the remainder of head; palpi brownish black. Antennæ black throughout; flagellar segments oval, shorter than the verticils. Head brownish black, opaque by a sparse pruinosity.

Cervical region and pronotum brownish yellow. Mesonotum almost uniformly brownish yellow, the præscutum with a median black stripe, most distinct on cephalic portion, narrowed or obsolete behind. Pleura with two black stripes, the long dorsal one extending from the propleura through the pleurotergite, the lower stripe occupying the ventral sternopleurite; intermediate region of pleura with a broad longitudinal yellow stripe, the surface more or less silvery, especially behind. Halteres infuscated. Legs with the coxæ and trochanters yellow; femora obscure yellow, clearer basally, the tips blackened, broadly and gradually so on the fore femora, narrowly on the middle and posterior legs; fore tibiæ and tarsi blackened; posterior tibiæ obscure yellow, the tips blackened; tarsi black, the posterior fourth of basitarsus weakly dilated. Wings with a strong brownish tinge, especially on the cells beyond the cord; prearcular and costal fields more whitened; stigma oval, dark brown; veins brown, paler brown in the basal part of wing. Venation: *Sc* long, *Sc*<sub>1</sub> ending about opposite two-thirds to three-fourths *Rs*, *Sc*<sub>2</sub> at near one-third the length of this vein; *R*<sub>2</sub> subequal to or longer than *R*<sub>2+3+4</sub>; branches of *Rs* parallel to one another for virtually their whole length, slightly diverging at outer ends, cell *R*<sub>2</sub> from three to three and one-half times as extensive as cell *R*<sub>4</sub>; *m-cu* about one-third its length beyond the fork of *M*.

Abdomen, including hypopygium, black, the proximal sternites a little paler. Sternal pocket of segment five concentrated on posterior half of segment, the more cephalic part comprised of a transverse band of strong setæ, directed caudad towards a transversely oval concentrated area near the posterior border; on sternite six with a longitudinal row of about 18 strong setæ on either side, with a transverse elongated glandular area near the posterior border of segment. Male hypopygium with the appendage of the basistyle subapical, on the mesal face opposite the smooth mesal flange, appearing as a long slender spine, subequal in length to the basistyle, virtually straight, the apical fourth narrowed into a black spine, the remainder yellow with a lateral fringe of yellow setæ. Outer dististyle a long sinuous rod, narrowed to the apical spine, the entire outer surface of style with strong scattered bristles. Inner dististyle with the beak terminating in two strong unequal spines; lateral lobe terminating in a microscopic point that is subtended by two strong bristles. Aedeagus flattened, terminating in a curved black spine, before apex with three pairs of setæ.

Habitat.—Peru.

Holotype, ♂, Fundo Sinchono, Huanuco, altitude 1500 meters, August 12, 1947 (José M. Schunke). Paratopotypes, 3 ♂♂.

The most similar species is *Teucholabis (Teucholabis) spinigera* Schiner, which differs in the coloration and especially in all details of structure of the male hypopygium.

**Teucholabis (Teucholabis) perbasalis** new species.

General coloration light brown, the pleura yellow with a conspicuous brownish black longitudinal stripe; rostrum black, relatively long; head dark brown; femora yellow, the tips narrowly blackened; wings subhyaline, the small oval stigma brown; abdomen bicolored, brown, the apices of the segments yellow; male hypopygium with the appendage of basistyle unusually proximal in position; outer dististyle with the main blade terminating in a single point.

MALE.—Length about 5.5 mm.; wing 4.6–4.8 mm.

Rostrum black, unusually long, subequal to the remainder of head; palpi black. Antennæ black throughout; flagellar segments oval, verticils long and conspicuous. Head dark brown or brownish black.

Cervical region dark brown. Pronotum above light brown, more darkened on sides. Mesonotum light brown, the pretergites yellow; scutellum somewhat clearer yellow. Pleura yellow with a conspicuous brownish black longitudinal stripe over the dorsal sclerites. Halteres uniformly brownish black. Legs with the coxæ and trochanters yellow; femora yellow, the tips narrowly blackened, the amount subequal on all legs, including about the distal eighth of the posterior femora; tibiæ obscure yellow, the tips more narrowly darkened; tarsi black; proximal third of basitarsus conspicuously dilated. Wings subhyaline, the small oval stigma brown; veins brown, more brownish yellow in the preareolar field. Venation:  $Sc_1$  ending about opposite midlength of  $R_s$ ,  $Sc_2$  a short distance from its tip; branches of  $R_s$  nearly parallel for most of their length,  $R_5$  thence diverging very strongly to the wing tip, cell  $R_4$  at margin a little more extensive than cell  $R_2$ ;  $m-cu$  approximately one-half its length beyond the fork of  $M$ .

Abdomen bicolored, brown, the apices of the segments more narrowly yellow; hypopygium yellow. Sternal pockets developed on segments five to seven, inclusive; on sternite five near posterior border with a darkened oval area, with further more scattered rows of microscopic papillæ but without a well-defined setal pattern; on sternites six and seven with relatively few stout setæ on either side of a wide median space. Male hypopygium with the appendage of basistyle unusually basal in position, appearing as a long sinuous rod arising just beyond base of mesal face of style, more cephalad than the low darkened mesal flange; appendage dilated on more than the basal half, provided at near midlength with relatively numerous long yellow

setæ, the apical fourth narrowed into a blackened spine. Outer dististyle a stout simple rod with strong scattered setæ, the tip obtuse or with a very short and weak spine. Inner dististyle with the main blade or beak terminating in a single point; lobe of style with four apical and one further more basal seta. Aedeagus stout, apex truncated, the lower angle produced laterad into a short blackened obtuse point; four strong setæ beyond mid-length of organ, with two weaker ones just back of tip. Proctiger with unusually long coarse setæ.

Habitat.—Peru.

Holotype, ♂, Pucallpa, Loreto, altitude 180 meters, March 22, 1947 (José M. Schunke). Paratopotype, ♂, March 9, 1947.

The most similar species include *Teucholabis* (*Teucholabis*) *pleuralis* Alexander and *T. (T.) lineipleura* new species, which likewise have the thoracic pleura distinctly striped. The present fly differs from all described species in the fauna by the unusually proximal position of the appendage of the basistyle, as described.

***Teucholabis* (*Teucholabis*) *hera* new species.**

General coloration black, the scutellum broadly yellow; fore femora black, the middle and hind pairs brownish yellow with darkened tips; posterior tibia with a slight swelling before tip; wings with cells before cord very weakly darkened, beyond the cord more strongly so, especially the outer fourth of wing; male hypopygium with the appendage of basistyle a slender spine; outer dististyle distinctive, long and slender, the tip expanded into an elongate pointed head, on mesal face at near midlength with two unequal spines; aedeagus a stout straight pale rod, the apex obtuse.

MALE.—Length about 6.5 mm.; wing 6.8 mm.

Rostrum black, about one-half as long as the remainder of head; palpi black. Antennæ black; flagellar segments oval, the more proximal ones somewhat more elongate. Head black.

Pronotum reddish yellow; pretergites and dorsopleural membrane clearer yellow. Præscutum and scutum polished black, the median region of latter and adjoining part of the præscutum obscure yellow; scutellum extensively light yellow, very narrowly darkened basally; postnotum black, the medio-tergite sparsely pruinose. Pleura black, with a paler more silvery area extending from above the midcoxa, expanded behind. Halteres with stem infuscated, knob obscure yellow. Legs with the fore coxæ brown, the remaining coxæ black; trochanters obscure brownish yellow, darker at tips; fore legs black, only the femoral bases narrowly brightened; middle and hind femora brownish yellow, the tips brownish black, involving about the distal fifth or sixth; tarsi black; posterior tibia with a slight swelling before tip; posterior basitarsus weakly dilated on more than the proximal third. Wings with the cells before cord very weakly darkened, beyond the cord

more strongly so, especially the outer fourth of wing; stigma oval, dark brown; a very narrow and ill-defined darkening over the anterior cord; prearcular cells restrictedly yellow; veins brown. Venation: *Sc* relatively long, *Sc*<sub>1</sub> ending about opposite three-fifths the length of *Rs*; *R*<sub>1+2</sub> a trifle longer than *R*<sub>2</sub>; branches of *Rs* extending nearly parallel to one another for virtually their entire lengths, cell *R*<sub>4</sub> only a little widened at margin; *m-cu* shortly beyond the fork of *M*.

Abdomen, including hypopygium, black. Sternal pocket of segment five triangular in outline, the point directed cephalad, the outer setæ directed inward; on sternite six with a row of about a dozen setæ on either side of the broad median area. Male hypopygium with the spine of basistyle subapical in position, slender, apparently with a smaller point at base. Outer dististyle of distinctive form, long and slender, the tip expanded into an elongate head, the extreme apex a spine; on mesal face at near midlength the style bears two unequal spines from a common base; proximal half of style dilated, provided with unusually long coarse setæ, the outer margin with microscopic serrulations. Inner dististyle with the outer blade or beak blackened, its apex microscopically roughened; setiferous lobe small and inconspicuous, provided with about three setæ. Aedeagus a stout straight pale rod, the apex obtuse.

Habitat.—Peru.

Holotype, ♂, Utcuyacu, Tarma, Junin, altitude 1600–3000 meters, February 10, 1945 (Felix Woytkowski).

The only generally similar described species is *Teucholabis* (*Teucholabis*) *ducalis* Alexander, which has the male hypopygium quite different in all details.

#### Genus *Gonomyia* Meigen

*Gonomyia* (*Progonomyia*) *adela* new species.

General coloration of mesonotum gray, the præscutum with three brown stripes; antennæ black, the proximal end of the first flagellar segment whitened; thoracic pleura striped with black and yellow; knob of halteres blackened; legs black; wings whitish subhyaline, with a heavy brown pattern; *Sc*<sub>1</sub> ending about opposite one-third the length of *Rs*.

FEMALE.—Length about 6.8 mm.; wing 7.5 mm.

Rostrum and palpi black. Antennæ relatively long for the female sex in this subgenus, black, the basal fourth of the first flagellar segment white; flagellar segments long-oval, a little shorter than the verticils. Front yellow; posterior portion of head dark gray, the anterior vertex extensively blackened, relatively broad, nearly four times the diameter of scape.

Pronotal scutum blackened in front, light brown behind; scutellum and anterior pretergites whitened. Mesonotal præscutum gray, with three brown stripes that are more or less confluent behind, extended laterad along the

suture; pseudosutural foveæ black, humeral region yellow, the lateral præscutal border more obscure yellow; scutum brownish yellow, the lobes variegated with brown; scutellum reddish brown, parascutella more blackened; mediotergite black, the lateral borders of cephalic half conspicuously light yellow; pleurotergite black ventrally, the dorsal half testaceous yellow. Pleura striped with black and yellow, the conspicuous black dorsal stripe extending from the cervical region to the abdomen, more widened behind; ventrad of this a slightly narrower yellow stripe, beginning behind the fore coxæ, passing beneath the halteres; ventral sternopleurite black, pruinose. Halteres with stem light yellow, knob blackened. Legs with the coxæ brownish black, the tips restrictedly yellow, the surface pruinose; trochanters and remainder of legs black throughout. Wings with the ground color whitish subhyaline, with an unusually heavy brown pattern, as follows: A postarcular area in bases of cells *R* and *M*; a major cloud at origin of *Rs*, not quite reaching vein *M* behind; broad seams over cord; spots at outer fork of *M* and near outer ends of veins *Cu* and *2nd A*; further diffuse clouds or washes in cell *M* and in centers of cells *1st A* and *2nd A*; veins dark brown. Venation; *Sc*<sub>1</sub> ending about opposite one-third the length of *Rs*, *Sc*<sub>2</sub> a short distance beyond this origin; *R*<sub>3+4</sub> present, about one-third vein *R*<sub>2</sub> alone; veins *R*<sub>3</sub> and *R*<sub>4</sub> divergent, nearly straight; outer fork of *M* with a spur backward from the point of angulation of *m* and outer section of vein *M*<sub>3</sub>; *m-cu* just before or close to fork of *M*.

Abdomen black, the pleural membrane yellow; genital shield blackened.

Habitat.—Peru.

Holotype, ♀, Chinchao, Huanuco, on wooded hills, altitude 2500 meters, September 20, 1947 (George Woytkowski).

Among the relatively few described species of the subgenus having patterned wings, the present fly is closest to *Gonomyia* (*Progonomyia*) *paramænsis* Alexander and *G. (P.) velutina* Alexander, especially the former. It differs in the distinctive body coloration and in the unusually heavy pattern of the wings. The Tropical American species of *Gonomyia* have been listed in a recent paper (Rev. de Ent., 18: 83–99, figs. 17–29; 1947).

***Gonomyia* (*Lipophleps*) *troilus* new species.**

Belongs to the *manca* group; rostrum yellow; general coloration of mesonotum light brown; thoracic pleura reddish brown, variegated with yellow; legs brown; wings with a dusky tinge, the stigma a trifle darker; male hypopygium with the outer angle of basistyle produced into a stout sinuous spine, its outer third setuliferous; dististyle single, elongate; ædeagus elongate, very slender, at apex dilated into a small blade.

MALE.—Length about 3.2 mm.; wing 3.8 mm.

Rostrum yellow; palpi dark brown. Antennæ black; flagellar verticils very long. Head fulvous orange, vaguely patterned medially behind with brown.

Pronotum and pretergites whitish yellow. Mesonotal præscutum almost uniformly light brown, restrictedly darkened in front; scutal lobes light brown, the median region obscure yellow; scutellum weakly infuscated at base, the posterior border obscure yellow; mediotergite light brown, the sides, with the pleurotergite, whitish. Pleura reddish brown, the propleura and a ventral stripe from behind the fore coxæ yellow, extended backward to the base of abdomen. Halteres infuscated. Legs with the coxæ testaceous, the fore pair darker; trochanters testaceous; remainder of legs brown. Wings with a dusky tinge, the stigma a very little darker; prearcular and costal fields yellow; veins pale brown. Venation:  $Sc_1$  ending a distance before origin of  $R_s$  about equal to three-fourths the length of the latter; cell 1st  $M_2$  conspicuously widened at outer end;  $m-cu$  at or close to fork of  $M$ .

Abdomen brown, hypopygium more yellowed. Male hypopygium with the basistyle relatively small, the outer apical angle produced caudad into a long sinuous spine that narrows very gradually into an acute blackened point; outer third or more of spine with abundant microscopic setulæ. Dististyle single, subterminal in position, a little more than one-half as long as the spine of the basistyle, the extreme tip slightly pointed; two fasciculate setæ near apex, the more basal one stouter. Aedeagus elongate, slender, broad at base, the apex dilated into a small blade.

**Habitat.**—Peru.

Holotype, ♂, Utcuyacu, Tarma, Junin, altitude 1600–3000 meters, February 11, 1947 (Felix Woytkowski).

The most similar described species include *Gonomyia (Lipophleps) orthomera* Alexander, *G (L.) reyesi* Alexander, and others, all of which differ evidently in the structure of the male hypopygium.

**Gonomyia (Lipophleps) tersa** new species.

Belongs to the *manca* group; pleura pale brown, the silvery stripe well indicated;  $Sc_1$  ending opposite or immediately beyond the origin of  $R_s$ ,  $Sc_2$  removed from its tip; male hypopygium with the apical lobe of basistyle nearly equal in length to the main body of style, provided with long setæ; dististyles of the two sides asymmetrical, one with two blackened points, the other with three such points or spines; phallosome asymmetrical, provided with two blackened spines and other projections.

**MALE.**—Length about 3.5 mm.; wing 3.7 mm.

Rostrum obscure yellow; palpi black. Antennæ black, the elongate flagellar segments provided with a dense erect pale pubescence of unusual length, additional to the scattered verticils. Head above variegated with dark brown and obscure yellow.

Thorax almost uniformly dark plumbeous; median region of scutum and the scutellum obscure yellow, the latter more darkened basally; mediotergite

obscure yellow, restrictedly darkened on posterior portion; pleurotergite obscure yellow. Pleura pale brown with a broad more silvery gray stripe that widens posteriorly. Halteres infuscated, the base of stem restrictedly yellow. Legs with coxæ and trochanters yellow; remainder of legs brown. Wings with a weak brown tinge, the prearcular and costal fields more whitened; stigma a little darker than the ground, inconspicuous; veins brown. Venation:  $Sc_1$  ending opposite or immediately beyond the origin of  $R_s$ ,  $Sc_2$  some distance from its tip,  $Sc_1$  alone subequal to  $m-cu$ ; branches of  $R_s$  divergent, more strongly so one the outer half, cell  $R_4$  at margin approximately three times cell  $R_2$ ;  $m-cu$  shortly before the fork of  $M$ .

Abdomen dark brown, the hypopygium somewhat paler. Male hypopygium with the apical lobe of basistyle nearly as long as the main body, provided with unusually long setæ, especially on the outer portion. Dististyles of the two sides asymmetrical, one with two short blackened spines, the other with an additional elongate spine; fasciculate bristles not or poorly differentiated. Phallosome asymmetrical, with two blackened spines, the longest a curved sickle from an enlarged setuliferous disk, besides the blackened point with a slender elongate pale rod; main body of phallosome flattened, the truncated apex at lower angle produced into a simple pale spinous point.

Habitat.—Peru.

Holotype, ♂, Pucallpa, Loreto, altitude 180 meters, March 16, 1947 (José M. Schunke).

There are rather numerous species of the group in Tropical America that have the male hypopygium of this general type, that is, with an elongate fleshy apical lobe on the basistyle and with the phallosome asymmetrical. Such forms include *Gonomyia* (*Lipophleps*) *anduzeana* Alexander, *G. (L.) dotata* Alexander, *G. (L.) lustralis* Alexander, *G. (L.) macswaini* Alexander, *G. (L.) petronis* Alexander, *G. (L.) philomela* Alexander, *G. (L.) ramus* Alexander, and others, all differing among themselves in the structure of the male hypopygium. *G. (L.) carrerai* Alexander falls in a different subgroup but has the dististyles on the two sides of the hypopygium even more dissimilar than is the case in the various forms so far described. Of the species above listed, some have symmetrical dististyles while others have these modified and differing from one another in various degrees.

***Gonomyia* (*Lipophleps*) *vehemens* new species.**

Belongs to the *manca* group; general coloration of thorax medium brown, the pleura more reddish brown with a poorly indicated pale longitudinal stripe; male hypopygium with the outer apical angle of basistyle produced

caudad into a long fleshy lobe; dististyles of the two sides symmetrical, bilobed, the outer lobe a blackened spine; phallosome consisting of blades and spinous points from a bell-shaped base.

MALE.—Length about 3.5 mm.; wing 4.2 mm.

Rostrum and palpi black. Antennæ black, relatively long, if bent backward extending approximately to the wing root; more proximal flagellar segments elongate, the four outer ones short; verticils of the elongate segments of unusual length. Head above obscure orange to yellow, the posterior vertex extensively gray.

Pronotum and pretergites pale yellowish white. Mesonotal præscutum and scutal lobes medium brown; median region of scutum, posterior ends of scutal lobes and the broad posterior border of the scutellum obscure yellow; mediotergite weakly darkened. Pleura pale reddish brown with a poorly indicated longitudinal pale stripe. Halteres infuscated. Legs with the coxæ pale reddish brown; trochanters obscure yellow; remainder of legs dark brown. Wings with a brownish tinge, the stigma barely darker; prearcular and costal fields pale yellow; veins brown, those in the yellow fields paler. Venation:  $Sc_1$  ending opposite origin of  $Rs$ ,  $Sc_1$  subequal in length to vein  $m$ ;  $Rs$  nearly as long as its anterior branch;  $m-cu$  a short distance before the fork of  $M$ .

Abdomen brown; hypopygium brownish yellow. Male hypopygium with the outer apical angle of basistyle produced caudad into a stout fleshy lobe that is subequal in length to the remainder of style; lobe obtuse, provided with relatively few but very long stout setæ. Dististyles of the two sides symmetrical, conspicuously bilobed, the outer lobe a blackened spine, the subequal inner lobe a little broader, its tip narrowly blackened, obtuse, and provided with microscopic setulæ; face of inner lobe with several strong erect setæ; a single fasciculate bristle before the blackened tip. Phallosome large, from a bell-shaped or calyx-like base, produced into two flattened, slightly divergent blades, with a shorter heavily blackened bispinous structure at their base; an additional more slender pale rod arising from the apex of the calyx.

Habitat.—Peru.

Holotype, ♂, Utcuyacu, Tarma, Junin, altitude 1600–3000 meters, February, 9, 1948 (Felix Woytkowski).

The present fly is most similar to species such as *Gonomyia* (*Lipophleps*) *vindex* Alexander, differing from this and all other regional members of the subgenus in the structure of the male hypopygium.